

INTERNATIONAL ACTIVITIES
regarding
THE ENVIRONMENTALLY SOUND
MANAGEMENT OF E-WASTE

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CONTENT OF PRESENTATION

- **INTERNATIONAL MARKETS FOR
“E-WASTE”**
- **INTERNATIONAL RULES & ACTIVITIES**
 - OECD
 - BASEL CONVENTION

REUSE & RECYCLING MARKETS for U.S. “E-Waste”

■ MOST REUSE MARKETS ARE EXPORT

- LARGE FOR-PROFIT & NON-PROFIT MARKETS IN DEVELOPING COUNTRIES**

■ MANY RECYCLING MARKETS ARE EXPORT

- STRONG FOREIGN DEMAND FOR RAW MATERIALS**
- NO U.S. SMELTERS FOR COPPER & PRECIOUS METAL RECOVERY FROM CIRCUIT BOARDS**
- REMAINING CRT GLASS FURNACES ARE IN ASIA**
- PLASTIC RECYCLING MARKETS ALMOST ALL OVERSEAS**

EXPORT MARKETS

- **MANY U.S. EXPORTS ARE TO REASONABLY SOUND OR EXCELLENT FACILITIES**
 - LARGE VOLUMES DISMANTLED IN U.S. BY HUNDREDS OF RECYCLERS
 - MANY MATERIALS IN COMMODITY FORM WHEN EXPORTED
 - LARGE AMOUNT OF RESALE OF WORKING EQUIPMENT
- **INCREASING NUMBER OF EXCELLENT FOREIGN PROCESSING FACILITIES**
- **UNFORTUNATELY, SOME EXPORTS CONTINUE TO UNSOUND FACILITIES**

RECYCLING MARKETS

CIRCUIT BOARDS

- **ONLY 5 COPPER/PRECIOUS METAL SMELTERS IN THE WORLD PROPERLY EQUIPPED TO MINIMIZE EMISSIONS OF DIOXINS & FURANS**
 - **ALL OECD COUNTRIES**
 - **CANADA**
 - **BELGIUM**
 - **SWEDEN**
 - **GERMANY**
 - **JAPAN**

RECYCLING MARKETS

CRT GLASS CULLET

- **REMAINING CRT GLASS-MAKING FURNACES ARE IN ASIA**
 - **Approx 15 furnaces**
 - **S. KOREA, MALAYSIA, INDIA, THAILAND, CHINA**
 - **NUMBER OF FURNACES CONTINUES TO SHRINK RAPIDLY**
 - **DEMAND REMAINS STRONG FOR CRT GLASS CULLET**
- **EXPORTS TO CANADA FOR SMELTING INCREASING**

INTERNATIONAL RULES

OECD IMPORT/EXPORT CONTROLS

■ 30 OECD COUNTRIES – MOSTLY DEVELOPED

– NA, WESTERN & NORTHERN EUROPE, AUSTRALIA, JAPAN, S KOREA

– OECD CONTROL SYSTEM

- Covers recycling only & facilitates trade**
- Notice & consent system, but more streamlined than Basel**
- Some difference in lists of hazardous wastes from Basel**
 - more risk-based**
- OECD system is sub-agreement under Basel**

OECD ESM PROGRAM

- ESM = “ENVIRONMENTALLY SOUND MANAGEMENT”
- COVERS WIDE ARRAY OF WASTES & SCRAP
- NOT MANDATORY, BUT COUNTRIES REPORT ON PROGRESS
- ENCOURAGES USE OF THIRD-PARTY CERTIFICATION
- TWO TYPES OF GUIDELINES:
 - “CORE ELEMENTS” FOR FACILITIES
 - WASTESTREAM-SPECIFIC GUIDELINES
 - REUSE/RECYCLING OF PERSONAL COMPUTERS

OECD ESM CORE ELEMENTS

■ Facilities should:

- BE PROPERLY AUTHORIZED/LICENSED
- HAVE AN EMS SYSTEM IN PLACE
 - MEASUREABLE OBJECTIVES/TARGETS
 - REGULAR REVIEW OF PROGRESS
 - COLLECTION & REVIEW OF EH&S DATA
 - REGULAR AUDIT/INSPECTION PROGRAM
 - PERIODIC FACILITY REPORT ON PROGRESS
 - SIMPLIFIED PROCEDURES FOR SMALL FIRMS

OECD ESM CORE ELEMENTS

■ Facilities should:

- SUFFICIENTLY PROTECT WORKERS & THE ENVIRONMENT
- HAVE ADEQUATE MONITORING, RECORDKEEPING, REPORTING
 - COMPLIANCE WITH SAFETY REQUIREMENTS
 - EFFLUENTS AND EMISSIONS
 - INCOMING, STORED & OUTGOING WASTE & MATERIALS
- HAVE AN ADEQUATE TRAINING PROGRAM
- HAVE AN ADEQUATE & UP-TO-DATE EMERGENCY PLAN
- HAVE A CLOSURE/POST-CLOSURE PLAN
 - ADEQUATE FINANCIAL GUARANTEE, IF REQUIRED

OECD ESM GUIDELINES FOR COMPUTERS

- ADDRESSES USED PERSONAL COMPUTERS
 - DESKTOPS, LAPTOPS, MONITORS, PRINTERS, etc.
- MATERIALS MANAGEMENT FOCUS
 - REFERS TO “USED & SCRAP PCs” RATHER THAN USING “WASTE” & “HAZARDOUS WASTE” DEFINITIONS
- NEEDED CONTROLS ARE DEPENDENT UPON NATURE OF RISKS (incl. facility size)
 - REFURBISHMENT: LOW RISKS, THUS LESSER CONTROLS
 - DISMANTLING & RAW MATERIAL RECOVERY: GREATER RISKS, THUS GREATER CONTROLS

OECD ESM GUIDELINES FOR COMPUTERS

■ ADDRESSES PROCESSING OPTIONS & PROPER HANDLING:

- CIRCUIT BOARDS**
- BATTERIES & CAPACITORS**
- CATHODE RAY TUBES (CRTs)**
 - LEADED GLASS**
 - PHOSPHORS**
- FLAT PANEL DISPLAYS & LAPTOPS**
- INSULATED WIRE**
- PLASTICS**

INTERNATIONAL RULES

BASEL CONVENTION

- **U.S. IS NOT A PARTY TO THE CONVENTION, WHEREAS 170 COUNTRIES ARE PARTIES**
- **BASEL CONTROL SYSTEM INTENDED TO PREVENT DUMPING OF HAZARDOUS WASTE IN DEVELOPING COUNTRIES**
- **BASEL CONTROL SYSTEM**
 - **REQUIRES WRITTEN NOTIFICATION & CONSENT OF COUNTRIES OF EXPORT, IMPORT & TRANSIT**
 - **BASED ON PRESENCE OF TOXICS - NOT RISK**
- **NON-OECD COUNTRIES CANNOT LEGALLY ACCEPT HAZARDOUS WASTES FROM U.S. w/o BILATERAL**
 - **U.S. HAS NO SUCH EXPORT BILATERALS**

BASEL CONVENTION

- **BASEL DEFINITION OF “HAZARDOUS WASTE” DIFFERS SIGNIFICANTLY FROM U.S. RULES**
- **FOR ELECTRONICS, BASEL APPLICABILITY IS OFTEN UNCLEAR**
 - **SHIPMENTS FOR REPAIR/REFURBISHMENT IS ESPECIALLY UNCLEAR**
- **RULES OF IMPORTING & TRANSIT COUNTRIES VARY re E-WASTE**

BASEL CONVENTION: U.S. ROLE

- **ALTHOUGH THE U.S. IS NOT A PARTY, WE ACTIVELY PARTICIPATE:**
 - TECHNICAL WORK
 - FINANCIAL CONTRIBUTIONS
- **TWO ISSUES HAVE HELD UP U.S. RATIFICATION:**
 - SCOPE OF CONVENTION
 - BAN ON TRADE OECD TO NON-OECD

BASEL CONVENTION INDUSTRY PARTNERSHIPS

- **CURRENTLY A LOT OF FOCUS ON ELECTRONICS,
USING INDUSTRY PARTNERSHIPS**
- **MOBILE PHONE PARTNERSHIP**
 - **GUIDELINES COMPLETED ON:**
 - **DESIGN, COLLECTION, REFURBISHMENT, RECYCLING**
 - **DUE DILIGENCE & EMS's ESSENTIAL**
 - **REPAIR/REFURBISHMENT REMAINS A BIG ISSUE**
- **PLANNING ONGOING FOR COMPUTER
PARTNERSHIP**

BASEL INDUSTRY PARTNERSHIPS

■ “CHAIRMAN’S ISSUE PAPER”

- Discusses problems with classification of mobile phones (& other electronics) as Basel “hazardous waste”**
 - Addresses repair/refurbishment & recycling**
 - Includes alternative legal mechanisms for parties to consider**
- Intent is to get Basel parties to look at need for practical approaches to TBM for all electronics**
- U.S. government strongly supports**

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